

IN RESPONSE TO THE OFFICE ACTION:

GENERAL REMARKS:

Claim 17 has been cancelled. Claims 12 has been amended. Applicant gratefully acknowledges the Examiner's indication of allowance for Claims 4, 5, 11, and 14.

REJECTION UNDER 35 U.S.C. § 112:

Claims 12 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In response, Claim 12 has been amended according to the specific concerns indicated by the Examiner in the Office Action in an effort to remedy the same.

Applicant submits that the above amendments obviate the rejection of the claims under 35 U.S.C. §112, second paragraph, and thus ask that the Examiner reconsider and withdraw the rejection of the claims and indicate their allowance in the next paper from the Office.

REJECTIONS UNDER 35 U.S.C. § 102:

Claims 1, 3, 6, 7, 12, 15-17 and 19 have been rejected under 35 U.S.C. §102(b) as being anticipated by Stol *et al.* (US 6769595).¹

¹ It is reminded that for there to be anticipation under 35 U.S.C. §102, "each and every element" of the claimed invention must be found either expressly or inherently described in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) and references cited therein. See also *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571, 230 USPQ 81, 84 (Fed. Cir. 1986) ("absence from the reference of any claimed element negates anticipation."); *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). As pointed out by the court, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention. *ATD Crop. V. Lydall, Inc.*, 159 F.3d 534, 545, 48 USPQ 2d 1321, 1328 (Fed. Cir. 1998). See also *In re Spada*, 911 F.2d 705, 708, 15 USPQ 2d 1655, 1657 (Fed. Cir. 1990).

As an example, Stol *et al.* ('595) does not disclose a hole in each component as recited in the rejected claims. Instead, Stol *et al.* ('595) discloses that the "riveting process of the present invention thus a) eliminates the need to machine a hole in the parts being joined" (Col. 2 lines 65-67). Thus Stol *et al.* ('595) can not be said to anticipate Claims 1, 3, 6, 7, 12, 15, 16, and 19. Furthermore, although Stol *et al.* ('595) discloses the use of alloys of Al or Ti, it does not disclose the use of intermetallic alloys. Also, the disclosure of Stol *et al.* ('595) is not suitable for intermetallic alloys because it heats the contact surfaces of the rivet and work pieces to melting temperatures. This heating is performed by the use of friction as the rivet is being pushed and twisted into the work pieces. If an intermetallic alloy is heated in this fashion it will result in cracks that are unacceptable.

Given the above, Applicant requests that the rejection of Claims 1, 3, 6, 7, 12, 15, 16, and 19 under 35 U.S.C. §102(b) be reconsidered and withdrawn and that the Examiner indicate the allowance of the claims in the next paper from the Office.

REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1-3, 6-10, 13 and 15-19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Yoshida (JPN 10-205510 A) in view of Baumgarten *et al.* (US 5111570). Further, claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over Stol *et al.* (US 6769595) in view of Rosman (US 3747466).

Applicants request that the Examiner reconsider and withdraw the above rejection in view of the following:

Regarding claims 1-3, 6-10, 13 and 15-19 rejected over Yoshida (JPN 10-205510 A) in view of Baumgarten *et al.* (US 5111570), Applicants assert that the suggestion, teaching, or motivation to combine the prior art references has not been met in this case. Further, the alloys presented in Baumgarten *et al.* ('570) are not of the intermetallic type and are of the conventional Al and Ti alloys. An alloy composed of Ti and Al is not necessarily an intermetal. The type of lattice structure found in conventional Al and Ti alloys is one difference as compared to intermetals. Other differences include: hardness, elasticity, and ductile to brittle transition

temperatures. A characteristic of intermetals is that they are brittle at room temperature. This special category of metals makes the application of Yoshida and Baumgarten in the obviousness rejection improper. One of ordinary skill in the art would not expect an intermetal to perform like a conventional alloy of Ti or Al. Additionally, Baumgarten *et al.* ('570) is concerned with repairing a hole in a single piece of titanium metal rather than bonding two pieces of metal together. The plug of Baumgarten *et al.* ('570) bonds to the metal as well which would not take place according to the teachings of Applicants' invention. Thus Applicants respectfully request that the obviousness rejection for Claims 1-3, 6-10, 13 and 15-19 be withdrawn.

Regarding Claim 18 which has been rejected under 35 U.S.C. §103(a) as being unpatentable over Stol *et al.* ('595) in view of Rosman ('466), Applicant asserts that the suggestion, teaching, or motivation requirement to combine the prior art references has not been met in this case. Further, as mentioned previously, Stol *et al.* ('595) does not disclose the use of pre-drilled holes, but instead uses heat and twisting to insert the rivet. As previously mentioned, an intermetal is not the same as Ti and Al alloys; it is a special type group as described above. Thus Applicant respectfully requests that the rejection of Claim 18 as being obvious be withdrawn.

In view of the above, Applicant submits that the requirement and burden of presenting of a *prima facie* case of obviousness under 35 USC §103 has not been presented. Therefore Applicant requests the reconsideration and withdrawal of the rejection of Claims 1-3, 6-10, 13 and 15-19 under 35 USC §103 and that the Examiner indicate the allowance of the claims in the next paper from the Office.

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It is believed that the above changes place the application in condition for allowance. Therefore, a Notice of Allowance is respectfully solicited.

The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 14-1437, Order No. 07589.0149.NPUS01.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Tracy W. Druce", written in a cursive style.

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